

# MLESAT.COM DIGEST

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That's New

## INTERNATIONAL

### TELSTRA REACHES AGREEMENT WITH EBU FOR SYDNEY OLYMPIC GAME COVERAGE

INTELSAT and Australia's Telstra Corporation have concluded a major agreement with the European Broadcasting Union (EBU) for coverage of the upcoming Sydney 2000 Olympic Games. This new agreement brings to 40,000 the number of program hours that have been booked through Telstra on seven different INTELSAT satellites for broadcast to a global Olympic audience estimated at up to four billion people.

The EBU, the largest professional association of national broadcasters in the world, has signed eight short-term leases with Telstra on the INTELSAT 804 satellite at 64 degrees East Longitude and on the INTELSAT 704 satellite at 66 degrees East Longitude for the broadcasting of the Sydney 2000 Olympic Games. The deal was announced at the National Association of Broadcasters (NAB) convention here this week.

The EBU transmissions will include more than 25 full-time program channels to over 30 broadcasters, and will be received at 42 locations. These broadcasters include the BBC, TVE of Spain, ZDF of Germany, and RAI of Italy. The channels will use a combination of MPEG-2 and ETSI digital transmission formats.

Telstra, the Official Telecommunications Supplier of the Sydney 2000 Olympic Games and Australian INTELSAT founding member and Signatory, coordinated these leases for the EBU on the Australian side, and will be supporting the EBU's local connections from each event venue to the International Broadcast Center (IBC) in Sydney. On the European side, the EBU will be receiving its feeds with help from Deutsche Telekom, BT, Telenor, and Telespazio. INTELSAT and its Signatory partners started working with the EBU to plan for the Sydney Olympic Games as far back as 1997.

The EBU, which is celebrating its 50th anniversary this year, serves 69 national broadcasters from 50 countries in the European area, and has 49

SESAT will soon be joined at EUTELSAT's 36 degrees East Longitude orbital position by the W4 satellite which is scheduled to be launched next month from Cape Canaveral aboard an Atlas 3 launcher. The two satellites will enable EUTELSAT to consolidate its position as a leading provider of capacity for television and data services and open important business opportunities in Russia, Africa and Asia. With the addition of SESAT and W4, EUTELSAT's resource will consist of 17 Ku-band satellites spanning the orbital arc from 12.5 degrees West to 48 degrees East Longitude.

### SESAT Technical Description

- Launch: April 17, 2000
  - Target service date: June 2000
  - Orbital position: 36 degrees East
  - Transponders: 18
  - Downlink frequencies:
  - 10.95-11.20 GHz,
  - 11.45-11.70 GHz,
  - 12.50-12.75 GHz.
  - Bandwidth: 72 MHz
  - EIRP (beam center):
  - Widebeam: 47 dBW
  - Steerable Beam: 49 dBW
  - Power: 5.7 kilowatts
  - Launch mass: 2500 kg
-

## That's New

associate members further afield. Eurovision, a service of the EBU, provides ad-hoc transmissions to broadcast mainly sports, cultural and news programs to its members and customers. In 1999 alone, Eurovision transmitted more than 100,000 news reports and 8,000 hours of sporting and cultural events. Telstra has also reached agreements with the broadcasters from the USA, Canada, Japan, Korea, China, Hong Kong and New Zealand.

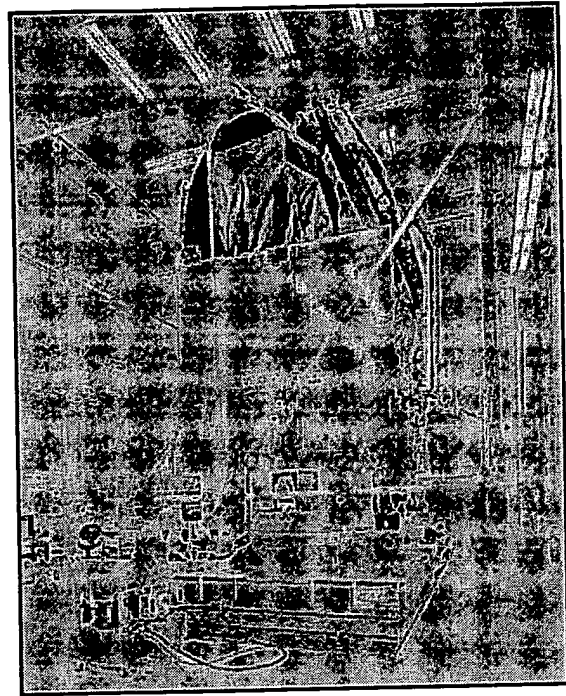
Telstra is responsible for building and managing the telecommunications infrastructure that will broadcast to up to four billion people around the world. Telstra Olympic Media and Broadcast Solutions Group, headed by Graham Hooson, provides a comprehensive range of broadcast services including domestic video, international cable and satellite, mobile and fixed earth stations, digital video transmission platforms as well as technical design, planning and service co-ordination.

### SEALAUNCH FAILURE INVESTIGATION CONTINUES

Sea Launch reports significant progress in the investigation of the launch failure on March 12, 2000. Preliminary investigations indicate off-nominal operation of the second stage propulsion system. All other systems appear to have performed as expected. Liftoff of the third flight of Sea Launch, carrying the ICO F-1 communications satellite, occurred on schedule at 6:49 a.m. (PST), March 12, from

the equatorial launch site at 154 degrees West Longitude. An anomaly occurred just prior to second stage separation. The ICO spacecraft did not reach orbit.

As a result of the off-nominal flight operations, an on-board automatic flight termination command was issued approximately 8 minutes after liftoff, near the end of the second stage burn. A solid telemetry link was maintained for 15 seconds after flight termination and intermittent data was received for an additional 5 minutes. During the entire flight phase, good quality and



*Galaxy IVR satellite. Courtesy Hughes.*

## THE AMERICAS

### GALAXY IVR SET FOR MID-MONTH LAUNCH

PanAmSat has shipped its Galaxy IVR satellite to French Guyana for a mid-April launch. Galaxy IVR, will serve as the permanent replacement for the 99-degree west longitude orbital location. Galaxy IVR's deployment will complete PanAmSat's satellite expansion and redeployment plan for North America, enabling the migrations of the company's Galaxy VI, Galaxy VII and Galaxy XI satellites to new orbital locations.

Galaxy IVR is an HS 601 HP model spacecraft built by Hughes Space and Communications with a communications payload consisting of 24 C-band and 24 Ku-band transponders. The high-power spacecraft will serve as the primary distribution platform for various video, Internet and telecommunications customers, including National Public Radio, Encore, Hughes Network Systems, NHK and Televisa. Galaxy IVR will also serve as the broadband pipe for the delivery of AOL Plus direct to consumers' homes via Hughes Network Systems' DirecPC satellite Internet service.

## 'hat's New

complete telemetry was received through both the line-of-sight systems and the Tracking and Data Relay Satellite System (TDRSS).

A core team of Boeing experts has heard strong evidence and supporting rationale indicating the root cause of the failure is related to a ground software logic error. Sea Launch partners Yuzhnoye and Energia detected the error during post-launch data review and probable cause investigation. Initial review of the flight telemetry supports this root cause scenario.

The logic error would appear to have failed to command a valve to close in the second stage pneumatic system. This system performs several functions, including operation and actuation for the steering engine. Data indicates this system had lost more than 60 percent of its pressure. Continued pressure loss reduced the capability of the engine, ultimately leading to a significant deviation in attitude, triggering the automatic flight termination system.

Each of the Sea Launch partners continues to conduct independent investigations, looking beyond the immediate concern to address the overall system, to ensure potential failure points do not exist elsewhere. Beginning this month, the full Sea Launch Failure Review Oversight Board, with representatives from customer companies as well as from the satellite and aerospace industries, will review and validate the results of each investigation to assess the root cause of the anomaly and corrective action required. Following this process, a return-to-flight program will be initiated.

Based on current progress, Sea Launch anticipates the investigation can be completed by mid-May, with a return to flight this summer. The Sea Launch partners--Boeing Commercial Space Group, RSC Energia, KB Yuzhnoye/PO Yuzhmash and the Anglo-Norwegian Kvaerner Group --remain committed to the program and to working together to resolve this anomaly in a timely fashion.

In addition, Galaxy IVR will serve as the new platform for PanAmSat's Galaxy 3DTM service, a bundled domestic digital delivery package offering TV broadcasters, programmers and business network managers a one-stop shopping resource for end-to-end digital video, audio and data transmission services among more than a dozen North American cities. Galaxy 3D offers cost-effective point-to-multipoint digital transmission services for sporting and special events as well as for program syndication.

Following the deployment of Galaxy IVR, PanAmSat will launch the PAS-1R and PAS-9 Atlantic Ocean Region satellites, the PAS-10 Indian Ocean Region satellite and the Galaxy IIIC spacecraft, serving the United States and Latin America. The new satellites will bring PanAmSat's global fleet to 24 spacecraft by mid-2001, making it the largest network of commercial geosynchronous communication satellites in the world.

### **GALAXY XI NOW SERVING LATIN AMERICA**

PanAmSat Corporation's Galaxy XI spacecraft, the world's largest commercial communications satellite, has commenced service, delivering advanced video, audio, Internet and telecommunications services throughout North America. While located at 99 degrees West Longitude, Galaxy XI, will serve as the transmission platform for customers that include National Public Radio, Encore, Hughes Network Systems, NHK and Televisa. The satellite will transition to 91 degrees West Longitude upon the deployment of the Galaxy IVR spacecraft to 99 degrees.

Galaxy XI, the first of the advanced HS 702 model spacecraft, was launched on December 21, 1999, contains 40 Ku-band and 24 C-band transponders. Galaxy XI will remain temporarily at 99 degrees West Longitude. Following the launch and service commencement of PanAmSat's Galaxy IVR satellite in the second quarter 2000, Galaxy XI will migrate to 91 degrees West Longitude, where it will serve as the long-term replacement for Galaxy VII.

Upon arriving at 91 degrees, Galaxy XI

## ASIA AND THE PACIFIC RIM

### PAS-8 TO PROVIDE NEW HOME FOR VIACOM IN ASIA PACIFIC

PanAmSat Corporation has announced that global customer Viacom Inc. has expanded its service and reach into the Asia-Pacific region through its transition from PanAmSat's PAS-2 Pacific Ocean region satellite to the PAS-8 spacecraft. Viacom's migration and increased service on PAS-8 has enabled the programmer to launch its Nickelodeon channel in New Zealand as well as to continue delivering other marquee cable television programming to audiences throughout the region.

Viacom has increased its service from 27 MHz on a PAS-2 Ku-band transponder to a full 36 MHz C-band transponder on PAS-8. The agreement will enable Viacom to continue delivering its programming, including MTV Taiwan and Nickelodeon Japan, in a high-quality digital format. In addition, the satellite's C-band Pacific Rim beam offers Viacom more extensive coverage of the Asia-Pacific, providing access to new markets.

Viacom will take advantage of the greater reach and extra capacity to deliver new services, including the launch of its Nickelodeon children's channel in New Zealand.

### INSAT 3B LAUNCH, SOLAR PANEL DEPLOYMENT SUCCESSFUL

On March 22, 2000, the INSAT-3B satellite was placed in geostationary orbit. Its solar arrays and antennas were subsequently deployed on March 27.

INSAT-3B carries two solar arrays, one on the south and the other on the north side, each with an area of 11.5 square meters that generate about 1.7 kilowatts of power. The solar array and the deployment mechanisms of INSAT-3B were developed by the ISRO Satellite Center (ISAC) at Bangalore and the solar array drive mechanisms and Power Transfer Assembly were developed by ISRO Inertial Systems Unit,

will join the Galaxy cable neighborhood, the premier platform for the delivery of the most recognized names in cable television to head-ends throughout the United States. Among programmers that will use Galaxy XI at 91 degrees are BET, Disney, Encore, Fox Sports, FX, Independent Film Channel, The Golf Channel and The WB Network.

### STATE OF CALIFORNIA SELECTS HUGHES

The state of California has contracted with Hughes Global Services Inc. (HGS) to provide satellite telecommunications products and equipment to State agencies on an expedited basis. This contract is an umbrella contract that allows state agencies to purchase satellite equipment and products directly from HGS, without having to undergo the lengthy process of seeking competitive bids. HGS has been performing under a similar contract for federal agencies since February 1999. There is no ceiling on the amount of business the company can do with the state.

HGS, part of Hughes Electronics Corp., was created to provide local, state and federal agencies, as well as commercial organizations, with access to a full range of satellite communications products and services. This is HGS's first major contract at the state level.

Other state applications expected to benefit from the increased availability of satellite communications include distance learning and training, telemedicine, agency-to-agency networks and remote access to the Internet.

HGS's arrangement with the federal government is similar. After completing one year under a pilot project, HGS was awarded a new, six-year contract in February by the General Services Administration's Federal Technology Service (GSA-FTS). Under that contract, which has a \$490 million ceiling, any federal agency can access HGS's spectrum of satellite services.

HGS's current satellite product and service offerings under the GSA-FTS contract include domestic and international satellite communications

Thiruvananthapuram. Initial switch-on and testing of communications payload were taken up in a phased manner over a ten-day period that extended into early April.

INSAT-3B will be collocated with INSAT-2E at 83 degrees East Longitude. INSAT satellites now occupy four orbital slots: INSAT-2B and INSAT-2C are collocated at 93.5 degrees East Longitude, INSAT-1D and INSAT-2A are collocated at 74 degrees East Longitude and INSAT-2DT is located at 55 degrees East Longitude.

INSAT 3B's main body is a cube measuring 1.93 X 1.7 X 1.65 meters. With the two solar panels fully deployed in orbit, INSAT 3B will measure 14.7 m in length. The sun-tracking solar panels, which occupy a total area of 23 square meters, generate 1.7 kilowatts of power. A 24 Ah Ni-Cd battery supports the payload operations during eclipses.

Like its predecessors in the INSAT series, INSAT 3B is 3-axis body-stabilized spacecraft that uses momentum/reaction wheels, earth sensors, sun sensors, and inertial reference unit. It also is equipped with unified bi-propellant thrusters.

The satellite has two deployable antennas and three fixed antennas that carry out the spacecraft's various transmit and receive functions. These antennas have a pointing accuracy of +/- 0.2 degrees in pitch and roll axes and +/- 0.4 degrees in yaw axis. The satellite utilizes a passive thermal control system.

INSAT-3B's communication payload provides 12 extended C-band channels, each having a bandwidth of 36 MHz. The Ku-band payload provides three channels, having a bandwidth of 77/72 MHz. The Mobile Satellite Service transponders operate in C/S band frequencies. Compared to INSAT-2C/2D, the power of extended C-band transponders on board INSAT-3B has been increased from 10 W to 15 W and that of Ku-band from 20 W to 55 W.

Once commissioned, INSAT-3B is expected to further boost the acceleration in

for mobile users; fixed satellite services, including long-term and occasional-use bandwidth from multiple providers; terminals and satellite-based video-teleconferencing; and DirecPC data delivery capability.

In addition, HGS is including its DemandNet and SkyMedia products in the GSA-FTS contract. DemandNet combines commercial very small aperture terminal (VSAT) technology with a global satellite constellation to provide affordable worldwide connectivity on demand. SkyMedia provides cost-effective compressed digital video delivery and digital data broadcast for distance learning and data sharing.

Although not currently provided, future GSA and state contracts with HGS will include Spaceway terminals for low-cost broadband-on-demand and other emerging communications services, thus ensuring the government has access to the most advanced technology in satellite communications as it becomes available.

#### SIRIUS-1 SET FOR JUNE LAUNCH

Sirius Satellite Radio, the satellite radio broadcaster, has announced that the first satellite in its three satellite constellation, Sirius-1, is scheduled to be shipped to its launch site on May 31st and launched June 28th. Sirius-2 is scheduled for launch in September and Sirius-3 in October.

Sirius Satellite Radio is building a digital satellite radio system that will broadcast unique music and entertainment programming to motorists throughout the continental United States. Sirius plans to offer 50 channels of commercial-free music all created at the company's National Broadcast Studio in New York City, and up to 50 channels of news, sports and entertainment programming for a monthly subscription fee of US\$ 9.95. Sirius Radio expects to begin broadcasting in the USA at the end of this year.

Sirius has exclusive alliances to factory-install Sirius receivers in DaimlerChrysler cars and light trucks, including Chrysler, Dodge, Jeep, Mercedes, and is the preferred service provider for Freightliner and Sterling

Very Small Aperture Terminal (VSAT) services throughout India. The major VSAT users include banking and financial institutions, stock markets, white goods sector, fast moving consumer goods sector and medium to heavy engineering companies. Several public and private sector units have established dedicated closed-user group networks for their in-house applications. At present seven transponders from INSAT-2B and INSAT-2C are being used for these applications and INSAT-3B will almost double the transponder capacity for these services.

For the first-time in India, Ku-band frequencies will also be used for VSAT services, which enables use of smaller ground terminals. INSAT-3B will provide the first set of transponders for Swaran Jayanti Vidya Vikas Antariksh Upagraha Yojana (Vidya Vahini) in a deal announced by the Indian Prime Minister on August 15 of 1998. These transponders will be used exclusively for interactive training and developmental communication and will be a further extension of the present Training and Developmental Communication Channel of INSAT that is being used by several agencies for interactive training and education. Tele-medicine is also expected to be introduced that will help in remote diagnostics and extension of super special hospital treatment to rural population.

INSAT-3B Mobile Satellite Service (MSS) has forward link channel in C X S band and return link in S X C band. MSS can support portable terminals and carry voice, fax or data. It also supports messaging service using reporting terminals.

#### **MEASAT SEEKS NASDAQ LISTING**

Malaysian satellite operator MEASAT Broadcast Network Systems is seeing approval from Malaysia's marketing regulator for a dual listing in Malaysia and the USA. MEASAT reportedly is seeking the listing in advance of an effort to flat its shares later this Summer. If granted approval, MEASAT would be the first Malaysian company to be listed on NASDAQ.

heavy trucks. Sirius also has exclusive alliances to factory-install Sirius receivers in BMW, Ford, Jaguar, Mazda and Volvo automobiles.

#### **PANAMSAT/REALNETWORKS ANNOUNCE STRATEGIC RELATIONSHIP**

RealNetworks and PanAmSat Corporation have announced the integration of RealNetworks' broadband-enabled RealSystem G2 to power PanAmSat's "NET/36" satellite-based Internet broadband broadcast network. The two companies will deploy RealSystem G2 throughout NET/36, enabling highly scalable broadcast to the edges of the Internet, bypassing sources of Internet congestion. The combination of PanAmSat's global geostationary satellite-based broadcast network, RealServer 7.0's performance capabilities and the broadband video encoding technology of RealProducer 7.0, provides content- and last-mile providers with a robust solution and network for delivering multimedia content virtually anywhere on the globe.

U S WEST.net and MegaBit Services customers will soon be able to access streaming audio and video content, directly from NET/36, following a recent agreement reached between U S WEST and PanAmSat. NET/36 will circumvent Internet congestion to deliver popular video and data content with high clarity and fidelity at high speeds. It will enable content providers to utilize PanAmSat's global satellite system, which can reach nearly every point on Earth.

#### **HUGHES TO PROVIDE DIRECT INTELSAT ACCESS**

Hughes Global Services, Inc. (HGS) has been authorized direct access to INTELSAT in accordance with the Federal Communications Commission's direct access order, and can now provide INTELSAT services to customers without going through an intermediary. "INTELSAT has been the industry standard for commercial satellite services for decades," said Ronald V. Swanson, president of HGS. "Now HGS has the ability to provide our government customers improved access to these

MEASAT, which operates broadcast and Internet operations in Southeast Asia under the Astro brand name, uses satellites with footprints that cover southern Asia all the way from Australia to India. MEASAT also is involved in a digital DTH platform called Kristal-Astro that will be targeting audiences in Brunei. The Malaysian "Astro TV" platform currently reaches more than 320,000 subscribers in Malaysia.

The news follow hard on the heels of an announcement made last month that U.S. software giant Microsoft has acquired an undisclosed stake in MEASAT. The link between the two companies will provide Microsoft with access to a large potential audience for future multimedia and interactive services developed for the region.

#### **PHOENIXNET FUNDING ANNOUNCED**

On March 22, 2000, AsiaSat, TSL, and TVG entered into agreements providing for an investment by TVG in PhoenixNet, a company organized under the laws of the Cayman Islands. AsiaSat and TSL initially invested approximately HK\$41,000 (41 percent) and HK\$59,000 (59 percent) respectively in PhoenixNet Limited, a wholly-owned Hong Kong subsidiary of PhoenixNet, in September 1999. AsiaSat and TSL will make a further contribution of approximately HK\$74 million and HK\$114 million respectively over 20-month period.

TVG's investment in PhoenixNet was expected to be completed by the end of March 2000, by which time TVG will have contributed approximately HK\$31 million in PhoenixNet. Each company will contribute from its own internal resources. Following TVG's investment in PhoenixNet, AsiaSat will own approximately 37 percent of the issued and outstanding ordinary shares of the joint venture, TSL will own approximately 54 percent and TVG will own approximately 9 percent.

PhoenixNet Limited was formed to provide Internet, multimedia and private data package and video distribution services on a wholesale basis to local Internet service providers in the Asia Pacific region

services, thus simplifying the process and reducing procurement time. This is a big step in providing commercial satcom services to the government." HGS' current General Services Administration's Federal Technology Service (GSA-FTS) contract provides government customers one-stop-shopping for satellite-based products and services in an e-commerce-like environment online at [www.hughesglobal.com](http://www.hughesglobal.com). This INTELSAT direct access agreement expands the HGS GSA-FTS offerings for government customers, providing more options, thus fostering a more competitive environment for users of satellite-based services. Domestic and international bandwidth from multiple service providers, offering mobile satellite telephony and data messaging, VSAT networks, video teleconferencing, access to the HGS-1 satellite's bandwidth, and the DirecPC data delivery capability, are available through the HGS GSA-FTS contract.

#### **GALAXY LATIN AMERICA & OPENTV ANNOUNCE INTERACTIVE SERVICES AGREEMENT**

OpenTV and Galaxy Latin America LLC (GLA) have announced an agreement under which OpenTV will provide interactive software solutions to GLA for its DIRECTV(TM) satellite television service in Latin America and the Caribbean. With this launch, GLA takes the first step in a comprehensive interactive strategy for its rapidly growing direct-to-home broadcast service in Latin America, which reaches 27 countries, 96 percent of its potential market. OpenTV gains a foothold in an important region it is not currently serving, securing its global industry leadership position.

GLA is the exclusive provider of DIRECTV in Latin America where it was first with region-wide direct-to-home satellite service. OpenTV's technology will allow GLA to provide its subscribers with interactive television (ITV) services, including electronic program guides, weather, games and banking applications. Services will be offered initially in selective Latin American markets, during the second half of 2000.

#### **ECHOSTAR ANNOUNCES NEW OFFICE DESKTOP**



that will then resell this satellite service to their respective end users. PhoenixNet Limited began trial operations on March 15, 2000.

## EUROPE, AFRICA & THE MIDDLE EAST

### SES CONTRACTS FOR 6 EUROBIRD TRANSPONDERS

Société Européenne des Satellites (SES), the operator of the ASTRA Satellite System, and Luxembourg's national telecom operator P&T Luxembourg, have signed an agreement enabling SES to use six 72 MHz transponders on EUTELSAT's "Eurobird" satellite to be positioned at 28.5 degrees East. The agreement provides additional transmission capacity to SES to be used by its customers in conjunction with SES' second orbital position at 28.2 degrees East Longitude.

P&T Luxembourg, the Grand-Duchy's signatory to and founding member of EUTELSAT, will make the Eurobird capacity available to SES for the 12-year lifetime of the new satellite. The agreement covers the use of six 72-MHz-wide transponders downlinking in the 11.20 - 11.45 GHz frequency band. Set to become operational in February 2001, Eurobird will be positioned at 28.5 degrees East Longitude, in the immediate vicinity of the ASTRA 2A satellite currently located at 28.2 degrees East Longitude.

The additional transmission capacity will be made available to SES customers for digital direct-to-home services in particular in the UK and Ireland. The transponders can also be used for single or multiple channel per carrier services (SCPC - MCPC) for data, audio, and video or as an Asia-Europe turnaround for up-linking signals transmitted by AsiaSat.

SES' development plans for 28.2 degrees East Longitude continue to be based on three additional satellites (ASTRA 2B, ASTRA 2C and ASTRA 2D) which will be co-positioned with the existing ASTRA 2A at SES' second orbital location over the coming 18 months. This coherent

### SERVICE

EchoStar Communications Corporation has announced the introduction of DISHLink, offering an affordable and convenient system for delivering broadband content and video channels to the office desktop. DISHLink is an intranet appliance that connects a customer's Local Area Network (LAN) to EchoStar's DISH Network(TM) satellite TV system, providing an easy way to distribute large data files as well as live streaming video via EchoStar's high-powered satellites to thousands of PCs in remote U.S. locations.

Due to the bandwidth limitations of the Internet and most corporate intranets, businesses typically distribute large electronic files either on CD-ROM or by using overnight mailing services. With DISHLink, customers can receive multi-gigabyte documents at speeds of up to 27 Mb/s. DISHLink's video streaming option also provides companies with the capability of delivering broadcast-quality video to desktop PCs and to remote locations at a fraction of the cost of high-speed terrestrial networks. Live video such as news, speeches, and educational or training classes, as well as hundreds of popular satellite TV channels, can be encoded and broadcast via satellite as IP multicast streams where they can be viewed on desktop or laptop PCs. Desktop video provides alternative ways of training and communicating with employees, partners, and customers and is the most effective way to offer training and to distribute corporate communications.

In addition to carrying private network content, DISHLink can also provide a selection of live channels right on each office PC to keep employees up to date on news and information necessary for the work place. A standard web browser allows DISHLink users to easily change channels or view the program guide.

With DISHLink, small and large companies now have the capability to send the latest information to all employees in a timely and cost-effective manner. DISHLink can deliver corporate communications, human resources information, video files,

deployment strategy, combined with the current availability of ASTRA 1D at 28.2 degrees East Longitude, will enable SES to meet the growing high-bandwidth requirements for new digital services at this orbital location.

#### **SESAT ON THE LAUNCHPAD IN BAIKUNAR**

Scheduled for launch on the night of April 17, 2000, SESAT (Siberia Europe Satellite) is an 18-transponder Ku-band spacecraft that will be positioned at 36 degrees East Longitude. Built by NPO-PM of Krasnoyarsk and equipped with a payload supplied by Alcatel Space, SESAT will be launched directly into geostationary orbit out of the Cosmodrome at Baikonur by a Proton/Block DM launcher. It is scheduled to go into service in the second quarter of this year.

SESAT is the first of seven satellites to be launched by EUTELSAT within the next 24 months as part of a far-reaching satellite expansion and replacement program requiring an investment of nearly 1 billion Euros. Six additional satellites, including HOT BIRD-6, which will carry EUTELSAT's first Ka-band payload, are currently under construction.

With two beams--one stretched Widebeam over Europe, western Siberia, North Africa and the Middle East, and a steerable Spotbeam over India--SESAT will enable EUTELSAT to consolidate its position in its core markets, and will open its first gateway to the Indian subcontinent to meet high bandwidth demands for Internet traffic between Europe and India. Up to six of the 18 transponders on the satellite can be switched individually into the Steerable Beam. Communications can be established between the Widebeam and the Steerable Beam and also within the Steerable Beam in order to offer users a high degree of operational flexibility.

Services to be carried on SESAT will include data and video-broadcasting, Internet backbone connections, high-speed Internet access, distance-learning, tele-medicine, and the high-speed transfer of computer software. In addition to leasing fixed bandwidth

graphic files, databases, computer-based training, educational training, point-of-sale advertising, and even computer software packages. Employees can access this service without leaving their desks.

EchoStar provides DISHLink customers with a secure FTP server that automatically schedules data and video files for delivery at the appropriate time and data rate. Live streaming video can be multicast over the subscribers LAN at adjustable data rates from 100 kb/s to 1.5 Mb/s. Unlike video streaming over the Internet, no additional bandwidth is required to support multiple, simultaneous viewers.

#### **ANIK F1 SERVICES FOR SOUTH AMERICA SET FOR FALL LAUNCH**

Telesat Canada plans to offer Brazilian customers an attractive new option for their telecommunications needs later this year. With the company's new Anik F1 satellite slated for launch in late summer, Telesat has announced that it has increased its investment in Brazil and kicked off a new campaign to market capacity on the new satellite. Anik F1, manufactured by Hughes Space and Communications, will be the first Telesat satellite to serve both North and South America. The satellite's South American capacity includes 16 Ku-band and 12 C-band transponders. Telesat has consolidated its investments in the region, investing an additional \$10 million to become the sole shareholder in the venture. Telesat's satellite facilities are marketed and sold by the company's subsidiary, Telesat Brasil Limitada, under the leadership of Managing Director Carlindo Hugueney.

Telesat's Brazilian subsidiary has signed a memorandum of understanding with Schahin Engenharia Limitada, one of Brazil's leading engineering companies, under which the companies will work together to serve customers in South America's largest telecommunications market. Under the Memorandum of Understanding, the companies will work together to identify and pursue business opportunities in Brazil. The collaboration gives customers access to both Telesat's unparalleled expertise

capacity for business networks, EUTELSAT will offer SESAT capacity on a bandwidth-on-demand basis, enabling users to instantly access satellite capacity as required and to be billed for the exact amount used.

EUTELTRACS, the fleet management service that provides data-transmission and position-reporting for mobiles via satellite in Europe, will also be migrating to SEASAT. EUTELSAT will be expanding the coverage zone offered to fleet managers by upgrading EUTELTRACS from a EUTELSAT II satellite to the Widebeam coverage on SESAT.

**Have something newsworthy? E-mail  
your press releases to  
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in the design and maintenance of satellite communications networks and Schahin's excellence in the design, engineering, construction and integration of telecommunications systems.

#### **ANDREW ANNOUNCES 1.2 METER SNG ANTENNA**

Andrew Corporation has introduced the Ku-Band NewsFlash 1.2-meter vehicle mountable, variable speed, receive/transmit satellite newsgathering antenna. This high performance, compact antenna is designed for mobile television newsgathering applications and can be mounted onto an SUV, RV, or truck.

The Ku-Band NewsFlash SNG antenna operates in the 10.95-12.75 GHz receive and 13.75-14.5 GHz transmit bands. The antenna's feed system is prime focus offset for extremely high gain, superior efficiency, and closely controlled pattern characteristics.

A 12V dc motorized system provides reliable and precise handling and ease of operation from the truck. The drive controller combines encoders and remote/local controls into either a panel mountable unit for in-vehicle use or a handheld remote antenna control unit. Both control systems have tactile feedback controls for easy system setup and operation. LED displays show the antenna position angles and operating status information.

The 1.2-meter Ku-Band NewsFlash antenna has automatic stowing capability, making it easier to pack after a newsfeed is completed. The unit may be stowed with a push of the button on the controller. To reduce the overhead clearance height of the truck and keep windloading to a minimum, the antenna stows at a height of just 18.30 inches.

Weighing in at 150 lb (68 kg), the NewsFlash antenna is light and portable for ease of transportation and speedy setup and takedown. Suitable for broadcast use worldwide, the electrical performance of the 1.2-meter SNG NewsFlash antenna meets or exceeds INTELSAT, EUTELSAT and other global operator requirements; formal INTELSAT type approval has been applied for.

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